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## ANNUAL REVIEW OF SEX RESEARCH SPECIAL ISSUE

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### What Theories and Methods From Relationship Research Can Contribute to Sex Research

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*Sexual and relationship satisfaction tend to be closely linked in the context of romantic relationships. Understanding how sexual processes influence relationships and how aspects of the relationship influence a couple's sex life can provide insight into the maintenance of sexual desire and satisfaction over time. In this article, we review how theories and methods that form the foundation for relationship research have made—and will continue to make—sexuality research a stronger, more theoretical, and methodologically sophisticated science. We discuss the key theories that have been used to advance our understanding of who is more likely to be sexually satisfied in relationships, when sex is most satisfying, and how couples can have more satisfying sex lives and relationships. We then provide an overview of dyadic and repeated-measures designs and demonstrate how the use of these types of research methods allows relationship and sexuality researchers to answer novel and nuanced questions about how romantic partners influence each other, as well as how sexual processes unfold in couples' daily lives and over time. Throughout the review, we highlight what we see as fruitful directions for future research at the intersection of sexuality and relationships.*

The majority of people (70%) see a happy sexual relationship as very important for a successful romantic relationship, which is higher than the percentage who consider adequate income (53%) and shared interests (46%) as very important (Taylor, Funk, & Clark, 2007). Indeed, on average, people who are more satisfied with their sex lives are also more satisfied with their overall romantic relationship (e.g., McNulty, Wenner, & Fisher, 2016; Yabiku & Gager, 2009), although some important exceptions to this include people who identify as asexual (e.g., Bogaert, 2006) and those in companionate or celibate marriages (e.g., Donnelly & Burgess, 2008). Despite the prominent role of sexuality in the maintenance and quality of romantic relationships, sexuality research and relationship research developed historically as two rather distinct research traditions—each

with its own journals, professional organizations, and academic conferences—and there was very little cross-talk between sexuality and relationships scholars (Dewitte, 2014). In 2010, Lisa Diamond presented two talks—one at the International Academy of Sex Research (Diamond, 2010a, November) and the other at the International Association for Relationship Research (Diamond, 2010b, July)—in which she lamented the relative absence of research at the intersection of sexuality and relationships and called for what she hoped would be a merger of the two disciplines. There were certainly researchers working at the intersection of these two topics before 2010, many of whom Diamond mentioned in her talks and they provided much of the inspiration and a model for the research which was to follow and which will be the focus of this review.

Since Diamond's talks, we have noticed a distinct shift, with increasingly more empirical papers on sexuality and relationships published in top journals. We have also noticed that there are more presentations given at sexuality conferences that focus

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on the key role of the interpersonal context in sexuality, as well as presentations at relationship conferences that feature research on sexuality. Given that sexuality research and relationship research have begun to merge in interesting and fruitful ways, we think the time is ripe to take stock of what we have learned from the burgeoning overlap between these two disciplines. In this review, we hope to demonstrate that the application of theories and methods used extensively in relationship research to sexuality research can help answer questions that are likely of great interest to sexuality scholars, including the following: Who is most likely to maintain a fulfilling sex life over time and navigate sexual challenges with greater success? When is sex associated with positive outcomes in a relationship and when might it detract from relationship quality? And what are the processes by which sexuality influences romantic relationships and vice versa?

We focus our review on research about sexuality in the context of established romantic relationships, which, like other close relationships, are characterized by “strong, frequent, and diverse interdependence that lasts over a considerable period of time” (Kelley et al., 1983, p. 38) but tend to be distinctly characterized by their high levels of trust, honesty, and sexual desire (e.g., Regan, 1998; Regan, Kocan, & Whitlock, 1998). Although there is excellent work applying some of the theories and methods we discuss in this article to adolescent sexual relationships (e.g., Fortenberry et al., 2005) and casual sexual relationships (e.g., friends with benefits; Vrangalova, 2015), discussing this work in detail is beyond the scope of the current review. In addition, research included in this review tends to take a positive approach to sexuality in relationships (for reviews, see Impett, Muise, & Brienes, 2013, which reviews research on the positive psychology of sexuality; and Impett, Muise, & Peragine, 2014, which is a theoretical and empirical review of research on sexuality in the context of romantic relationships and focuses primarily on positive indicators of sexual, relational, and personal well-being). The positive indicators we discuss are mainly subjective evaluations of people’s relationships and sex lives, which, in accordance with the particular study, are referred to by related but distinct terms, such as *relationship satisfaction*, *relationship quality*, and *sexual satisfaction*. Research oriented toward sexual health or risk outcomes is also beyond the scope of the current article, although the methods we discuss have been applied to studying sexual health in diverse populations (e.g., Mustanski, 2007). Given that relationship science is a key area of social-personality psychology (see review by Reis, 2012), the methods and theories that we discuss in this review were primarily developed in that discipline, although some have roots in clinical psychology, developmental psychology, and other disciplines such as communication and family studies.

Given the target and readership of this journal, we focus our review on how theories and methods used in relationship research have enhanced—and can continue to enhance—our understanding of sexuality, and in particular sexual processes as they unfold in real-life sexual relationships over the course of time. We also believe, however, that sex research has much to offer relationship research, which would be a fruitful topic for a

separate paper. At the end of the review, we briefly introduce what we see as two key strengths of sexuality research that we hope will be adopted by even more relationship researchers.

### Theoretical Contributions of Relationship Research to Sex Research

Relationship science is a theory-rich discipline (for a review, see Finkel, Simpson, & Eastwick, 2017) that provides a road map for developing predictions and integrating findings across a broader literature. In part due to its interdisciplinary nature, sexuality research has traditionally lacked strong theoretical influence, and theories in sexuality research have not been closely linked to research methods (Bancroft, 2000; Weis, 2002). That is, sexuality studies are often not designed to inform specific theoretical questions, and in the cases when prominent theories exist, they often lack empirical support (for a review, see Weis, 2002). In particular, theories and research on interpersonal aspects of sexuality have been scarce (Dewitte, 2014), meaning that we have only begun to learn about the processes that influence sexuality in relationships. In recent years, several of the prominent theories in relationship research have been extended to contribute to our understanding of sexuality and have helped researchers answer important questions about how sexual processes unfold in the context of relationships.

Recently, Finkel et al. (2017) reviewed the literature on close relationships with the goal of extracting the core principles of relationship theory and research. We adopt three of the key questions<sup>1</sup> that guide these principles to organize this section of the article. The first question asks: What tendencies do people bring to their relationships? Therefore, in the first section, we review theory and empirical work that informs the *individual differences* that shape sexual and relationship outcomes. The second question is: How does context affect relationships? In the corresponding section, we review theory research that informs when sex is most beneficial in relationships and when it might detract from relationship quality. To do so we consider the *motivational factors* that shed light on situations and contexts that are associated with variation in sexual and relationship satisfaction. The third question asks: How do relationships operate? In the associated section, we review theory and research on the *processes* or mechanisms through which sexuality influences relationships.

### Individual Differences: Who Is More Likely to Benefit From Sex and Maintain Sexual Desire and Satisfaction Over Time?

In this section, we discuss three theoretical perspectives, originally derived from various areas of psychology but

<sup>1</sup>Finkel et al. (2017) discuss a fourth key question—“What is a relationship?”—that is not within the scope of the current review, so we did not use it to guide the organization of this section.

applied to relationship science, that have provided important insights into the individual differences that influence who is more likely to be satisfied with the sexual aspects of their relationship and who might struggle to maintain a satisfying sex life. Although there are numerous relationship theories that can fruitfully be applied to sexuality research, we focus our discussion on three theories in particular that have generated—and can continue to generate—bodies of work to explain couples' differing sexual satisfaction: attachment theory (e.g., Mikulincer & Shaver, 2016), theories of communal motivation and responsiveness (e.g., Clark & Mills, 2012; Reis, Clark, & Holmes, 2004), and implicit theories of relationships (for a review, see Knee & Petty, 2013).<sup>2</sup>

**Attachment Theory.** Since the 1980s (Hazan & Shaver, 1987), attachment theory has been one of the hallmark theories explaining people's cognitive and behavioral tendencies that shape their relationship outcomes. Attachment theory asserts that in adulthood the same behaviors that are characteristic of infant-caregiver attachment (Bowlby, 1979)—seeking and maintaining physical proximity, seeking comfort when needed, experiencing distress upon separation, and viewing the attachment figure as a secure base—are directed toward a romantic partner (Fraley & Davis, 1997). Individual differences in these processes are best conceptualized along the two continuous dimensions of attachment anxiety and avoidance (Brennan, Clark, & Shaver, 1998). An individual's position on the anxiety dimension reflects the extent to which he or she desires closeness with romantic partners but has heightened fears of rejection and abandonment. An individual's position on the avoidance dimension reflects the extent to which he or she feels uncomfortable with closeness in romantic relationships and strives for independence and emotional distance from partners. In contrast, secure individuals generally view themselves as worthy of love, and trust that their relationship partners will be responsive to their needs. In other words, secure individuals are comfortable with closeness without heightened fears of abandonment, and are likely to score low on both the anxiety and avoidance dimensions (Brennan et al., 1998; Mikulincer & Shaver, 2007).

In recent years, researchers have applied attachment theory to understand sexuality in the context of romantic relationships (for a review, see Dewitte, 2012), finding that people use sex to meet specific attachment-related needs, such as reassurance and proximity to a partner. An extensive body of research has shown that individual differences in attachment orientation are associated with different reasons for engaging in sex and desire for different types of sexual relationships, and are differentially associated with sexual desire and satisfaction (see reviews

by Dewitte, 2012; Mikulincer & Shaver, 2007; Stefanou & McCabe, 2012). Broadly speaking, people who are high in attachment anxiety equate sex with love and use sex to meet their needs for emotional intimacy and reassurance. They report being preoccupied with relationship issues and overly concerned with meeting their partner's sexual needs during sex (Birnbaum, Reis, Mikulincer, Gillath, & Orpaz, 2006; Davis, Shaver, & Vernon, 2004; Schachner & Shaver, 2004). On the other hand, reflecting their greater discomfort with intimacy and closeness, people higher in attachment avoidance tend to focus on detaching sex from love and tend to have lower sexual satisfaction than less avoidant people. In short, the application of attachment theory to sexuality has led to important insights into which partners and couples are more likely to report high sexual satisfaction and how partners influence each other's experiences of sex in a relationship. Because current research on attachment and sexuality has been reviewed comprehensively elsewhere (see Dewitte, 2012; Mikulincer & Shaver, 2016), we focus our discussion on some recent developments we believe can prompt fruitful lines of work in the area.

**Methodological considerations for future research on attachment and sex.** As pointed out by Dewitte (2012), the extant research on sex and attachment requires greater theoretical integration and has several limitations, including an overreliance on correlational designs and oftentimes failing to consider both partners' attachment styles. Likewise, much of the work demonstrates associations between attachment styles and sexual outcomes but does not address the potential explanatory psychological processes for these associations (Dewitte, 2012). We believe these continue to be important considerations for future work on sex and attachment, as indicated by the contribution of studies that overcome these limitations, some of which we discuss in this section.

For example, one study has demonstrated that the interplay between partners' attachment styles (dyadic effects) has consequences for a couple's sexual frequency. Brassard, Shaver, and Lussier (2007) found that sex occurs less frequently in couples in which an avoidant man has a more anxious female partner and in couples in which an anxious man is partnered with a less anxious woman. The neediness and desire for closeness that is characteristic of anxious attachment seem to be better received by a more anxious, compared to a less anxious, or more avoidant, partner, highlighting the importance of dyadic approaches (Brassard et al., 2007). Expanding on this, researchers could investigate how partners' attachment styles interact to predict a broader array of sexual outcomes, such as length of foreplay, frequency of orgasm, and sexual desire.

In regard to greater research into the mechanisms through which attachment relates to sexual outcomes, recent research by Birnbaum, Mikulincer, Szepeswol, Shaver, and Mizrahi (2014) may inspire one possibility. Given the interconnectedness—but relative independence—of the sex

<sup>2</sup> Other research has examined individual differences (for a review, see Sanchez-Fuentes, Santos-Iglesias, & Sierra, 2014), education level, religious upbringing (e.g., Haavio-Mannila & Kontula, 1997), facets of personality (e.g., Donnellan, Conger, & Bryant, 2004; Meltzer & McNulty, 2016), and endorsement of gender roles (Rosenzweig & Dailey, 1989), but are outside the scope of the current review.

and attachment systems, the researchers developed a measure to examine hyperactivation and deactivation of the *sexual* behavioral system specifically (as opposed to activation of the general attachment system; Birnbaum et al., 2014). Sexual hyperactivation (intense but anxious expressions of sexual desire) and sexual deactivation (inhibitions of sexual inclinations) were shown to capture unique aspects of sexual outcomes unaccounted for by relational attachment style. Because this work is in its nascent stage, how sexual and attachment system activation might work in conjunction remains to be examined. It is possible that hyperactivation or deactivation of the sexual system is one psychological process through which attachment orientation relates to sexual outcomes.

We believe there is also enormous potential for attachment style to be applied to relationships beyond those that include heterosexual monogamous couples. Moors and colleagues (2015) illustrated the importance of investigating diverse samples when researching attachment and sex, such as those involved in consensual nonmonogamy (CNM)—relationships in which all parties agree that it is acceptable to have additional romantic or sexual partners (Conley, Ziegler, Moors, Matsick, & Valentine, 2013). In an initial study on individuals who had never engaged in CNM, the authors found that avoidant individuals reported more positive attitudes toward and greater willingness to engage in CNM—perhaps not surprising given avoidant individuals' positive attitudes toward nonexclusive sexual relationships (Gentzler & Kerns, 2004). However, when the researchers looked at the actual attachment styles of individuals currently engaging in CNM, they found that individuals in consensually nonmonogamous relationships were *lower* in attachment avoidance (relative to those in monogamous relationships), which may be due to the level of trust and communication required to maintain consensually nonmonogamous relationships. This study showcases how examining different forms of relationships can offer new insights into attachment and sexuality. For example, future research can compare individuals' attachment styles and sexual functioning across concurrent consensually nonmonogamous relationships to uncover which relational and sexual processes help account for greater sexual satisfaction in one particular sexual relationship over another.

**Facilitating attachment security through sexual interactions.** Secure individuals generally have stable and satisfying romantic relationships and have more positive sexual experiences in relationships relative to their insecure counterparts (Birnbaum et al., 2006; Simpson, 1990). Secure individuals are confident and comfortable in their sexual activities, leaving them unencumbered by sexual anxiety and able to have mutually pleasurable sexual experiences (e.g., Diamond & Blatt, 2007; Davis et al., 2006; for a review, see Mikulincer & Shaver, 2016). Because secure attachment is associated with both relational and sexual benefits, one important goal for future research is to enhance individuals' attachment security.

Research on attachment has documented changes in partners' attachment orientation over the course of a relationship: Anxious attachment tends to normatively be higher in the early of stages of a relationship, and it is possible for insecure people to become more secure over time when paired with a secure partner (Davila, Karney, & Bradbury, 1999; Hudson, Fraley, Brumbaugh, & Vicary, 2014). There is suggestive evidence that positive sexual experiences may play a role in such increases in security. For example, recent evidence demonstrates that displays of sexual desire can reduce attachment insecurity in the context of established relationships. When men displayed higher sexual desire for their partners (as coded in an in-lab discussion about the couple's sex life), both they and their partners reported a decline in their attachment-related insecurities over an eight-month period (Mizrahi, Hirschberger, Mikulincer, Szepeswol, & Birnbaum, 2016).

In similar fashion, the sexual aspects of a relationship have shown promise in buffering against the negative consequences of insecure attachment. Research by Little, McNulty, and Russell (2010) demonstrated that attachment avoidance was unassociated with marital satisfaction among spouses who engaged in more frequent sex, whereas attachment avoidance is typically associated with poorer marital quality. Similarly, although attachment anxiety is typically associated with poorer marital quality, in this study attachment anxiety was unrelated to marital quality on days when people reported more satisfying sex. The psychological process underlying both of these attachment effects was expectancies for partner availability, suggesting that more frequent and higher-quality sex may alleviate insecure people's automatic concerns that their partners will not be responsive to their needs (Little et al., 2010). Thus, interventions targeted at improving couples' sex lives may also have attachment benefits, a possibility that can be explicitly tested in future work.

Another valuable extension to this line of work is more research on relationships over time. Past research has shown that forming an attachment bond (two years plus or minus six months into a relationship) (Tennov, 1998; Winston, 2004) is often associated with lower sexual desire (Diamond, 2003). Given that attachment anxiety (Davila et al., 1999; Eastwick & Finkel, 2008) and sexual desire (Klusmann, 2002) both typically tend to decline over time in relationships, research could follow couples in burgeoning relationships to test whether normative declines in sexual desire directly correspond to normative declines in attachment anxiety. The possibility that declines in desire and declines in attachment anxiety might go hand in hand seems to counter the previously mentioned findings that displays of sexual desire can boost feelings of attachment security in couples (Mizrahi et al., 2016). Investigating how desire and attachment security might interact differently at various relationship stages may help reconcile these seemingly discrepant ideas.

**Theories of Communal Relationships and Responsiveness.** Another way in which people in romantic relationships differ is in the extent to which they are

motivated to be responsive to their partners' needs. Theories of communal giving, a prominent theoretical approach in relationship research (for a review, see Clark & Mills, 2012), suggest that in communal relationships—such as those we have with family members, romantic partners, and close friends—people provide care noncontingently, that is, they give care to each other with little concern for what they will receive in return. *Communal strength* refers to individual differences in how motivated a person is to meet the needs of a specific partner (i.e., a romantic partner) (Mills, Clark, Ford, & Johnson, 2004). Communal perspectives, where benefits are given to a partner based on need, have often been contrasted with exchange perspectives, where benefits are given with the expectation that similar benefits will be returned or where costs and benefits are monitored to ensure that things are kept even between partners (see Clark & Mills, 2012). People high in communal strength are more willing to sacrifice for the welfare of the partners and relationships insofar as the personal costs incurred in meeting their partners' needs are reasonable and they trust that their partners will be responsive to their own needs when they arise (Kogan et al., 2010; Mills et al., 2004).

Theories of communal motivation have recently been applied to the sexual domain of relationships to answer questions about who is more likely to maintain sexual desire over time in relationships or remain satisfied when partners face discrepancies in their sexual interest. *Sexual communal strength* is the extent to which people are motivated to be noncontingently responsive to their partners' sexual needs (Muise, Impett, Kogan, & Desmarais, 2013), including when a partner's need is to not have sex (Muise, Kim, Impett, & Rosen, 2017). In a qualitative study in which people were asked to report the types of things they do to meet their partners' sexual needs, people reported that they would engage in sex even when not entirely in the mood; be open-minded about their partners' preferences; communicate with their partners about their sexual likes and dislikes; and ensure mutuality, such that both partners' needs are acknowledged and met in the relationship (Muise & Impett, 2012).

Somewhat paradoxically, focusing on meeting a partner's sexual needs is associated with increased benefits for the self. In a sample of long-term couples, people high in sexual communal strength reported higher sexual desire and satisfaction and were more likely to maintain desire over a four-month period of time, compared to people lower in sexual communal strength (Muise et al., 2013; Muise & Impett, 2015). In addition, and more intuitively, the romantic partners of people high in sexual communal strength also reported greater relationship satisfaction and commitment than the partners of people who were less motivated to meet their partners' needs. One reason why people with communally motivated partners reaped benefits is because they detected that their partners were indeed more responsive to their needs during sex and felt more satisfied in their relationships as a result (Muise & Impett, 2015). A fruitful avenue for future research is to investigate who is most likely to be communal in a sexual relationship. Communal

theorists posit that attachment security may underlie communal giving (Clark & Jordan, 2002). Secure attachment should make it easier to be responsive to the needs of others, whereas people who are insecurely attached may be more likely to abandon communal norms, especially in the face of a relational threat (Clark & Jordan, 2002).

Communal people even tended to prioritize their partners' sexual needs in situations where it is not easy to do so. People higher in sexual communal motivation were motivated to be responsive to their partners' needs in situations where their partners were interested in sex but their own desire for sex was low; in these instances, both partners reported higher sexual and relationship satisfaction (Day, Muise, Joel, & Impett, 2015). Being communally motivated is also associated with greater satisfaction for both partners during the transition to parenthood—a time when many couples experience declines in desire and satisfaction and report increased sexual problems (for reviews, see Haugen, Schmutz, & Wenzel, 2004; Jawed-Wessel & Sevcik, 2017). In one study of couples who had recently had their first baby, both a person's motivation to meet his or her partner's sexual needs (i.e., high sexual communal strength) and motivation to be understanding about the partner's need not to engage in sex had unique associations with both partners' sexual and relationship satisfaction (Muise et al., 2017). Taken together, these findings suggest that being communal and demonstrating responsiveness to a partner's needs can help couples navigate sexual conflicts of interest or maintain satisfaction during times when sexual frequency is low. An avenue for future research is to investigate how people can express communal care when declining a partner's sexual advances and the implications for both partners' sexual and relationship satisfaction.

Sexual communal strength may also play a role in the maintenance of diverse relationship types. In a sample of people in consensually nonmonogamous relationships, people whose primary partner (in this study, the partner with whom they spent more time) was communally motivated to meet their sexual needs were more satisfied in both that relationship and in their secondary relationship (Muise, Loughton, Moors, & Impett, *under review*). Recent research has found that people in consensually nonmonogamous relationships tend to report greater satisfaction in their primary relationship (which is associated with higher sexual communal strength) but a greater proportion of time spent on sex in their secondary relationship (Balzarini et al., 2017). This finding may suggest that having a primary partner who is high in sexual communal strength helps facilitate sexual satisfaction in the secondary relationship. The work on sexual communal strength demonstrates the value of considering prosocial perspectives—those focused on giving to others—in addition to individual attitudes and beliefs in the maintenance of sexual relationships (Muise & Impett, 2016).

Another line of research on the other side of the communal coin—narcissism—demonstrates just how critical responsiveness is (and how damaging lack of

responsiveness can be) to the maintenance of sexual relationships. Although people low in communal motivation are not necessarily narcissists, in many ways narcissists are the opposite of highly communal people: Instead of being focused on meeting their partners' needs, they tend to have low levels of empathy, focus on themselves, and exploit others for their own gains (Campbell, Foster, & Finkel, 2002). In a longitudinal study, McNulty & Widman (2013) found that *sexual narcissism*, characterized by sexual exploitation, sexual entitlement, and low sexual empathy, predicted declines in sexual and relationship satisfaction for both partners over the first five years of marriage. One reason why people high in sexual narcissism are more likely to report lower sexual and relationship satisfaction is because they are more likely to compare their sex lives to the sex lives of others, and when told they are having sex less frequently than another couple their satisfaction is denigrated to a greater degree than people lower in sexual narcissism (Day, Muise, & Impett, 2017). These findings further highlight just how important it is for people to be responsive to their partners' needs, given that sexual narcissism detracts from both partners' relationship and sexual satisfaction.

Being responsive to a partner's needs in general (not just in the sexual domain) also has implications for a couple's sexual relationship. When people perceive that their partners are responsive—that is, when their partners show that they understand, validate, and care about their needs (Reis et al., 2004)—they reported higher sexual desire (Birbaum et al., 2016); this link was particularly robust for women. In addition, perceived partner responsiveness may be one route through which sexual satisfaction fosters relationship quality. On days when individuals felt more sexually satisfied, they perceived their partners as more responsive, which in turn predicted increases in daily marital satisfaction from the previous day (Gadassi et al., 2016). Although general perceptions of partner responsiveness have implications for sexual desire and satisfaction in relationships, previous work has demonstrated that the links between sexual responsiveness (i.e., sexual communal strength) and sexual and relationship outcomes were not due to the extent to which people were generally responsive or communal in their relationships (Day et al., 2015; Muise, Impett, Desmarais, & Kogan, 2013), suggesting that being responsive specifically in the sexual domain uniquely contributes to satisfying sex and relationship outcomes.

#### **Balancing a partner's needs and one's own needs.**

One important note about theories of communal motivation and responsiveness is that they are not meant to suggest that people should *always* be willing to meet one another's needs. Indeed, theories of unmitigated communion (Fritz & Helgeson, 1998)—the tendency to prioritize the needs of others and neglect one's own psychological and physical well-being (Fritz & Helgeson, 1998)—have recently been extended to the domain of sexuality to garner important insights into how communal giving in the domain of

sexuality impacts satisfaction. In a daily diary study of couples coping with a clinical sexual issue (i.e., pain during intercourse), on days when women reported higher unmitigated sexual communion than typical (i.e., they focused on their partners' sexual needs to the exclusion of their own needs), both partners reported poorer sexual function, lower sexual satisfaction, and lower relationship satisfaction (Muise, Bergeron, Impett, & Rosen, 2017). Therefore, even though people high in unmitigated sexual communion report being solely focused on meeting their partners' sexual needs, their partners are not benefiting from their hypervigilance to their sexual needs and, in fact, it is detracting from their satisfaction. Clinicians developing interventions for couples coping with a sexual issue may consider approaches that enhance sexual communal motivation while still promoting autonomy.

**Implicit Theories of Relationships.** By adapting a prominent theory from relationship science—implicit theories of relationships—recent research has identified another important predictor of who is likely to maintain high-quality sexual relationships: individuals' lay beliefs about sexual satisfaction (Maxwell et al., 2017). A robust body of research demonstrates that people's lay beliefs, or implicit theories, about whether they can change their internal attributes (incremental beliefs) or whether internal attributes are relatively fixed (entity beliefs; Dweck, Chiu, & Hong, 1995) shape how they relate to others and how they behave in a variety of contexts (for a review, see Dweck, 2011). Over the past two decades, scholars have adapted these concepts to the context of close relationships to examine how lay beliefs about what makes for a satisfying romantic partnership, termed implicit theories of relationships (ITRs), influence people's motivations, behaviors, and attributions in romantic relationships (e.g., Franiuk, Pomerantz, & Cohen, 2004; Knee & Canevello, 2006; Knee, Patrick, & Lonsbary, 2003). This body of research suggests that relationship satisfaction is shaped both by the extent to which people believe in the importance of compatibility (destiny beliefs) and the extent to which they think they can work to improve their relationships over time (growth beliefs).

Inspired by the implicit theories of relationships literature, Maxwell et al. (2017) identified and developed measures of two implicit theories people may have regarding sexual relationships: sexual growth beliefs and sexual destiny beliefs. People high in sexual growth beliefs think that sexual satisfaction is maintained by work and effort, whereas people high in sexual destiny beliefs think that sexual satisfaction results from finding a highly compatible partner, a sexual "soul mate." Sexual growth beliefs were associated with higher sexual satisfaction and relationship quality, and translated to higher satisfaction for one's romantic partner (above and beyond that partner's own implicit sexual beliefs). Preliminary evidence suggests it is in part because those high in sexual growth beliefs reported being higher in sexual communal strength, and more willing to make

sexual changes for their partners, that they reported higher sexual and relationship satisfaction. In contrast, those who hold sexual destiny beliefs had relationship quality that was contingent upon the current circumstances of the sexual relationship: When they experienced sexual disagreements, or doubted their partner was their sexual soul mate, they reported lower relationship quality. These effects were observed above and beyond individuals' general relationship beliefs in growth and destiny, suggesting the uniqueness of the sexuality-specific beliefs.

In a similar vein, other researchers have adapted measures of implicit theories of personality and intelligence (Chiu, Hong, & Dweck, 1997; Dweck, 2000) to assess whether people believe sexual attraction or sexual chemistry is malleable over the course of a relationship (Bohns, Scholer, & Rehman, 2015). This work suggested that people who believe sexual attraction is more fixed, similar to destiny beliefs (versus more malleable, similar to growth beliefs) were more likely to advise another person to end a relationship if it initially lacked chemistry, and were more likely to endorse engaging in destructive actions (e.g., getting angry, ending relationship) in response to imagining an unfulfilling sex life with their partner. In addition, those who believed sexual attraction is more fixed (versus more malleable) more closely tied their relationship quality with the current quality of their sex life, echoing findings by Maxwell et al. (2017) regarding people who hold sexual destiny beliefs.

As research on implicit sexual beliefs is in its infancy, there are numerous avenues for future work on the topic, such as what specific behaviors people enact in order to “work” on their sexual satisfaction or change their sexual chemistry, and whether interventions can be used to increase peoples' beliefs that they can work on their sexual satisfaction. Some initial evidence (Maxwell et al., 2017, Study 6) suggests that reading ostensible magazine articles touting the importance of sexual growth beliefs can temporarily raise peoples' levels of sexual growth beliefs in an in-lab setting. Thus, future research could examine whether receiving information such as this can boost peoples' sexual growth beliefs over a longer period of time. Another interesting possibility is, given that sexual growth beliefs tend to be associated with secure attachment, perhaps enhancing secure attachment will also enhance sexual growth beliefs (or vice versa), particularly because both secure attachment and sexual growth beliefs view involve a readiness to cope with relational difficulties. Last, it is reasonable to expect that there are limits to the benefits of sexual growth beliefs and that there are times when trying to “work it out” may not be best for one's sexual relationship. For example, it is possible, similar to work in the general relationship domain (Kammrath & Peetz, 2012), that those higher in sexual growth beliefs become more frustrated if they

perceive a partner is not working hard enough to make desired changes in the bedroom.

### **Motivational Factors: When Is Sex Most Beneficial for Relationships?**

Although research suggests that, in general, engaging in more frequent sex with a romantic partner is associated with greater sexual and relationship satisfaction, research on sexual motivation suggests that not all sexual experiences are similarly satisfying (see reviews by Impett et al., 2014; Muise, Kim, McNulty, & Impett, 2016). In this section, we discuss two prominent theories on motivation that have been applied to relationships research—approach-avoidance motivational theory and self-determination theory—that provide insight into when sex is most beneficial and when it might detract from satisfaction (for a data-driven approach to understanding sexual motivation, see Meston & Buss, 2007).

**Approach-Avoidance Social Motivation Theory.** A prominent theory in the study of close relationships is approach-avoidance social motivation theory (for a review, see Gable & Impett, 2012). This theory suggests that social interactions per se do not influence well-being. Instead, it is people's motives or goals for these interactions that are important. Put simply, approach social goals direct individuals toward positive outcomes, such as closeness in their relationship, whereas avoidance social goals direct individuals away from negative outcomes, such as conflict (Gable, 2006). This distinction is important because it recognizes that having an incentive is different than the absence of a threat, and that the presence of a threat is different than the absence of an incentive.

The application of approach-avoidance social motivation theory to the domain of sexuality has provided insight into when sex is more beneficial for relationships and when sex might detract from satisfaction (for a review, see Impett, Muise, & Rosen, 2015). Approach-avoidance social motivation theory demonstrates that the reasons why people engage in sex matter for their sexual and relationship satisfaction (Cooper, Talley, Sheldon, Levitt, & Barber, 2008). Several daily experience studies have shown that on days when people in romantic relationships reported engaging in sex for approach goals, such as to enhance intimacy or express love for their partners, they felt more positive emotions and both partners reported higher sexual and relationship satisfaction (Impett, Peplau, & Gable, 2005; Muise, Impett, & Desmarais, 2013). In contrast, when people engaged in sex to avoid negative outcomes in their relationships, such as to avoid conflict or partner disappointment, they experienced more negative emotions and relationship conflict, and both partners reported lower sexual and relationship satisfaction. Similarly, in a study of heterosexual and lesbian women, engaging in sex for the approach goal of enhancing intimacy was associated with sexual satisfaction, whereas having sex for the avoidance goal of averting a partner's disapproval was associated with sexual



dissatisfaction (Sanchez, Moss-Racusin, Phelan, & Crocker, 2011). People's sexual goals also influence their sexual and relationship outcomes over time; people who engaged in sex more frequently for avoidance goals over the course of a three-week daily experience study reported lower sexual satisfaction and had partners who felt less sexually satisfied and committed to maintaining their relationship four months later (Muise, Impett, & Desmarais, 2013).

Research guided by this theory has also shown that individuals who are motivated by approach goals are more likely to sustain high levels of sexual desire for their partner over time (Impett, Strachman, Finkel, & Gable, 2008). On days when people engaged in sex with their partners for approach goals, both partners reported higher sexual desire and, in turn, felt more satisfied with the sexual experiences and the relationships. In contrast, on days when people engaged in sex for avoidance goals such as to avoid disappointing their partners, not only did they feel lower desire and satisfaction but their partners also reported lower desire and satisfaction as well (Muise, Impett, & Desmarais, 2013). Therefore, engaging in sex to pursue positive outcomes for the partner or relationship, such as enhancing closeness, is one way that couples can maintain satisfying sexual relationships and higher desire over time.

In fact, having sex in pursuit of approach goals may be one reason why people high in sexual communal strength and people who are securely attached reap sexual and relationship benefits. People who are more communal in their sexual relationships tend to engage in sex more for approach goals and, in turn, report higher sexual desire (Muise et al., 2013). In addition, one reason why people high in avoidant attachment report lower sexual and relationship satisfaction might be due to their sexual goals. Avoidant attachment is associated with having sex to avoid negative relationship interactions and is negatively associated with having sex to express love for a partner (Impett, Gordon, & Strachman, 2008), which tend to be associated with lower satisfaction (Muise et al., 2013). Instead, avoidantly attached people are more likely to have sex for self-enhancing reasons, such as to pursue their own sexual pleasure (e.g., Schachner & Shaver, 2004). Although people high in attachment anxiety tend to engage in sex to please their romantic partner, to express love, and to achieve emotional intimacy (Davis et al., 2004; Impett et al., 2008), goals which have been linked to positive sexual and relationship outcomes (Muise et al., 2013), they are also less likely to engage in sex in pursuit of their own physical pleasure (Davis et al., 2004; Impett et al., 2008). The neglect of their own needs might mitigate the benefits of their partner-focused approach goals, findings which dovetail with recent research on the potential costs of focusing on meeting another person's needs to the detriment of one's own needs (Muise et al., 2017).

Recent experimental work on approach and avoidance sexual goals suggests that it is possible to enhance people's approach goals for sex, and ultimately their satisfaction. In a study of individuals in romantic relationships, half of the participants were told about the benefits of approach sexual

goals and asked to try to focus on approach reasons for sex over the next week, and the other half were given no instructions about sexual goals. One week later, people in the approach condition reported higher sexual and relationship satisfaction compared to those in the control group (Muise, Boudreau, & Rosen, 2017). Therefore, initial evidence suggests that interventions can be designed to enhance approach motivation, which could have implications for treating clinical sexual issues, but research is needed to determine how long changes would be sustained.

The existing work on sexual motivation has almost exclusively focused on people's motivations for having sex (for a paper on reasons for not engaging in sex, see Patrick, Maggs, Cooper, & Lee, 2011) and has not considered how people can maintain satisfaction in their relationships when they decline their partners' sexual advances. Although sexual rejection tends to be associated with lower sexual satisfaction (Byers & Heinlein, 1989), in our ongoing research on sexual rejection we have found that when people reject their partners' sexual advances in reassuring ways, such as affirming their attraction for their partners, their partners are better able to maintain feelings of relationship satisfaction compared with when they reject their partners in other ways, such as ignoring their partners or criticizing the way sex was initiated (Kim, Muise, & Impett, 2015, September). Importantly, rejecting a partner in positive ways (i.e., reaffirming love and attraction) results in similar or even higher levels of sexual and relationship satisfaction as having sex for avoidance goals (Kim, Muise, & Impett, invited resubmission), suggesting that positive forms of rejection are a viable alternative to engaging in sex for avoidance goals.

**Self-Determination Theory.** Another prominent theory for understanding the role of motivation in shaping sexual and relationship satisfaction is self-determination theory (Deci & Ryan, 2000). According to self-determination theory, people have an inherent tendency to develop a unified sense of self by balancing three psychological needs: competence (i.e., feeling confident and efficacious), autonomy (i.e., having agency over one's behavior) and relatedness (i.e., feeling connected and understood) (Deci & Ryan, 2000). In this theoretical orientation, motivations can be viewed on a continuum from goals that are more self-determined (i.e., motivations that reflect a person's own values or interests) to those that are less self-determined (i.e., driven by external rewards or punishments). In the context of romantic relationships, participating in relationship activities for more self-determined reasons, rather than feeling coerced, guilty, or not knowing why one is involved in the relationship, have implications for the quality and maintenance of romantic relationships (Knee, Lonsbary, Canevello, & Patrick, 2005; Knee, Patrick, Viator, Nanayakkara, & Neighbors, 2002).

Research applying self-determination theory to the study of sexuality in relationships has demonstrated that people experience greater psychological well-being and better relationship quality, and have more positive sexual experiences

when they engage in sex for goals that are more self-determined in nature, such as “because I enjoy being sexual” and “for the pleasure of sharing a special and intimate experience,” compared to when they engage in sex for goals that are more controlled in nature, such as “because I would feel bad to withhold from my partner” and “because I feel pressured by my partner to have sex” (Brunell & Webster, 2013; Smith, 2007). The key reason for these associations is that people who engaged in sex for more self-determined reasons reported greater sexual need fulfillment—that is, they reported feeling more autonomous, competent, and related (i.e., cared about) during their sexual experiences—compared to those who had less self-determined reasons for engaging in sex. A recent study applied self-determination theory to sexual motivation in a sample of people in both monogamous and consensually nonmonogamous relationships and demonstrated that there were more similarities than differences in motivations for engaging in sex between people in these different types of relationships (Wood, Desmarais, Burleigh, & Milhausen, *in press*). In fact, the key difference between people in monogamous and consensually nonmonogamous relationships was that people in consensually nonmonogamous relationships engaged in sex for more personal intrinsic reasons, such as to have fun, compared to those in monogamous relationships. In both groups, engaging in sex for more self-determined reasons was associated with greater sexual and relationship satisfaction, and this was accounted for by greater need fulfillment (Wood et al., *in press*).

Although to our knowledge no work has integrated self-determination theories and approach-avoidance theories of sexual motivation, this would be a fruitful avenue for future research. It is possible that one reason why both self-determined motivations and approach goals are associated with benefits is because they both reflect people acting in line with their authentic values and desires. Authenticity is part of the definition of self-determined motivation (Deci & Ryan, 2000), and research on sacrifice in relationships has demonstrated that when people sacrifice for approach goals they report feeling more authentic and this is, in turn, associated with personal and relationship well-being (Impett, Javam, Le, Asyabi-Eshghi, & Kogan, 2013). Integrating these theories may also advance our knowledge of sexual motivation. For example, although engaging in sex to please a partner is an approach goal, it is possible that people could pursue this goal for more self-determined reasons, such as because it is in line with their genuine feelings and values, or for less self-determined reasons, such as feeling pressured by their partners or feeling guilty for not meeting their partners’ needs. Future research could consider the interaction between approach and avoidance sexual goals and self-determined motivation.

Currently, research on sexual motivation has been conducted primarily with people in heterosexual relationships (for studies including nonheterosexual participants, see Armstrong & Reissing, 2015; Sanchez et al., 2011) and future research on sexual motivation would benefit from more diverse samples. Including more diverse populations

in research can answer theoretical questions about the interplay of gender and sexual orientation in the consequences of engaging in sex for different motivations. Future research could investigate whether engaging in sex to please a partner has the same sexual and relational outcomes for women in same-sex compared to mixed-sex relationships.

### **Processes: How Do People Have More Satisfying Sex Lives and Relationships?**

Theories of relationship maintenance in relationship research have focused on the processes through which partners and couples have more satisfying and fulfilling relationships. It is our perception that sexuality research has traditionally been less focused on examining underlying psychological processes or mechanisms (see also Dewitte, 2012) compared to relationship research. Thus, in this section, we discuss prominent relationship theories on relationship maintenance that have been applied to sexuality to understand how couples can have more fulfilling sex lives and relationships.

**Cognitions: Attitudes, Expectancies, and Motivated Cognition.** Even though engaging in sex is a physical act, conceptually, sexual satisfaction is cognitive in nature: It is an evaluation of, or attitude toward, sex with one’s partner (e.g., Shaw & Rogge, 2016). Thus, to better understand how sexual satisfaction is maintained, it is important to understand the cognitive processes that facilitate it. Once again, turning to relationship research can help shed light on this question. Research indicates that what people feel about their partners at an automatic gut level (McNulty, Olson, Meltzer, & Shaffer, 2013), what people expect in a relationship (e.g., Neff & Geers, 2013), how they construe relationship events (e.g., Bradbury & Fincham, 1990), and how much they idealize their partners or their relationships (e.g., Murray et al., 2011) all predict how satisfied people feel with their relationships.

Guided by broader social cognition theories (e.g., the MODE model; Fazio & Olson, 2014; see McNulty & Olson, 2015), research is beginning to show that people’s implicit, automatic feelings about their romantic partners may be more diagnostic of relationship satisfaction than their explicit self-reported attitudes toward their partners, which can be susceptible to motivated biases (e.g., McNulty et al., 2013). Applying these ideas to the sexual domain, researchers found that the more frequently a couple has sex, the more positive their attitudes toward their partners at an implicit gut level, but not at an explicit self-report level (Hicks, McNulty, Meltzer, & Olson, 2016). Future research can continue to explore what aspects of people’s sex lives beyond sexual frequency shape their implicit feelings of relationship satisfaction, which may have predictive validity beyond their self-reported feelings (McNulty et al., 2013).

Another recent focus in relationship research is the role that expectations play in influencing the quality of relationships. For example, a recent theoretical model proposes that

the more a romantic partner fulfills an individual's expectations, particularly regarding the partner's ability to meet higher-order needs (e.g., self-actualization and personal growth), the higher a person's marital quality (Finkel, Cheung, Emery, Carswell, & Larson, 2015; Finkel, Hui, Carswell, & Larson, 2014). Indeed, in mixed-sex newlywed couples, expecting more (relative to less) need fulfillment from a relationship was associated with more stable marital satisfaction four years later, as long as the couple had the skills to meet these expectations (e.g., ability to enact positive behaviors during a conflict discussion; McNulty & Karney, 2004). Correspondingly, a small body of literature suggests that expectations for sexual satisfaction are important for understanding the quality of people's sex lives and relationships. In a longitudinal test of the role of sexual expectancies in mixed-sex newlywed couples, women who initially expected to be more satisfied with their sex lives reported increases in their sexual satisfaction six months later. In contrast, for men, it was changes in sexual frequency that predicted changes in their sexual satisfaction over the six-month period. These gender differences are consistent with evidence that women's sexual experiences are more strongly influenced by contextual factors than men's (e.g., Peplau, 2003), whereas men's sexual evaluations may be more strongly influenced by objective aspects of sex, such as frequency. How often a couple engages in sex is a very concrete behavior that is easily verifiable, less open to interpretation, and thus less susceptible to the perceptual influences of expectations (Neff & Geers, 2013). This suggests that in future research it may be harder to alter men's (as opposed to women's) sexual expectations, and in fact increasing men's expectations for sexual frequency could be detrimental, as they can easily discern if their expectations are not being met (Neff & Geers, 2013).

Substantial evidence from relationship research suggests that people are motivated to view their relationships positively, often in an overly idealistic way, and these cognitive processes help maintain romantic relationships over time (Murray et al., 2011), at least for those in healthy relationships at the outset (McNulty, O'Mara, & Karney, 2008). Research on positive illusions in relationships suggests that individuals who are more committed to their relationships tend to view their partners' traits in an overly rosy light, are overly optimistic about the future of their relationships, and view their relationships as better than the average relationship (Martz et al., 1998; Murray, Holmes, & Griffin, 1996; Van Lange & Rusbult, 1995). Mirroring this literature, research in the sexual domain (de Jong & Reis, 2014) has revealed that romantic partners tend to positively construe their sexual relationships such that they view their current partners as their ideal sexual partners, feel (perhaps unwarrantedly) optimistic about their future sex lives, and perceive their sexual relationships as superior to others' sexual relationships. People higher in commitment are more likely to positively construe their sexual relationships in these ways, which reflects a motivational process serving to bolster people's resolve to persist in their relationships. This research implies

that believing a partner *is* one's sexual ideal is associated with positive outcomes, which may seem in contrast to the previously discussed work that believing a partner *needs to be* your sexual ideal (sexual destiny beliefs) may be associated with negative relationship outcomes. This presents an empirically testable possibility that it may be important to view your sexual partner and sex life in an overly rosy manner, while simultaneously being prepared to work through sexual challenges that may arise (sexual growth beliefs).

Although an individual's expectations for the future of the relationship are important, so too is their interpretation of events after they transpire. There is robust evidence that more satisfied couples tend to attribute their partners' negative behaviors to external causes, whereas more distressed couples tend to see their partners' negative behaviors as intentional and reflective of global relationship issues (for a review, see (Bradbury & Fincham, 1990). For instance, when newlywed spouses in healthy relationships (i.e., facing relatively minor problems) had more positive attributions for their partners' negative behaviors (e.g., viewing the partner as less responsible), they were better able to maintain marital satisfaction over time (McNulty et al., 2008). The importance of attributions may also be seen in sexual processes. One recent study found that for first-time mothers the more they attributed their sexual concerns to stable causes, or to their romantic partners, the less sexually satisfied they were (Vannier, Adare, & Rosen, *in press*). Future research might consider how positive attributions—either about a partner's sexual motivation or about a partner's intentions in general— influence people's feelings about their sex lives. For example, perhaps those who have more positive attributions for why their partners turned down their sexual advances (e.g., assuming a partner was tired versus uninterested) are more satisfied in their sex lives.

**Exchange Theory.** Another process through which sexuality influences relationship outcomes is how partners perceive the balance of costs and rewards in the relationship. Social exchange theory has taken on a number of variations since it was first proposed by Thibaut and Kelley (1959), including equity theory (e.g., Walster, Walster, & Berscheid, 1978) and the investment model of commitment (Rusbult, 1983). In general, the principles of social exchange perspectives are focused on the exchange of resources between two or more people, which can be tangible rewards, such as money, or less tangible rewards, such as emotional support. These perspectives focus on the balance of rewards and costs, equity or equality in a relationship, and reciprocity (for a review, see Sprecher, 1998). Exchange perspectives differ from communal strength in that they tend to focus on keeping things even or equitable in relationships, as opposed to need-based giving that is not contingent on receiving something in return. In various forms, ideas from social exchange theories have been applied to a number of topics in sexuality (i.e., partner selection, extradyadic sexual behavior) (for reviews, see Byers &

Wang, 2004; Sprecher, 1998). However, for the purpose of the current review, we focus on the application of exchange perspectives to sexual satisfaction in relationships.

One of the most prominent models for understanding sexual satisfaction in relationships is grounded in exchange perspectives: the interpersonal exchange model of sexual satisfaction (IEMSS; Lawrance & Byers, 1995). Specifically, the IEMSS is focused on how the balance of sexual rewards and costs for an individual, the equity between partners in sexual rewards and costs, and the comparison between actual and expected rewards and costs are associated with sexual satisfaction in a relationship (for a review, see Byers & Wang, 2004). This research has shown that people tend to be the most sexually satisfied when they experience high sexual rewards (e.g., feeling closer to their partners), experience fewer sexual costs (e.g., engaging in sexual activities that they do not enjoy), and perceive that both partners are relatively equal in sexual rewards and costs (Lawrance & Byers, 1995). In one study of female undergraduate students, difficulties with sexual function were seen as a sexual cost and sexual difficulties accounted for the association between greater sexual costs and lower sexual satisfaction (Stephenson & Meston, 2011). In addition, in a sample of married couples, partners who perceived equitable treatment in their relationships were more sexually satisfied than partners who felt either overbenefited or underbenefited, although overbenefited partners were more sexually satisfied than those who felt underbenefited (Hatfield, Greenberger, Traupmann, & Lambert, 1982). Finally, people who evaluate their rewards and costs more favorably than their expectations regarding how rewarding a sexual relationship *should* be are more sexually satisfied (for a review, see Byers & Wang, 2004). Qualitative research on participants' conceptualization of sexual satisfaction also supports themes from social exchange theory and the IEMSS specifically. When asked "What is sexual satisfaction?" participants identified both personal and dyadic processes (Pascoal, Narciso, & Pereira, 2014). Among the dyadic processes, one theme that emerged was mutuality between partners, which is consistent with the idea that the perceived balance between partner exchanges is an important component of sexual satisfaction (Byers & Wang, 2004).

One important caveat to the existing work on social exchange theories is that another line of research on communal versus exchange perspectives of relationships suggests that being focused on tracking what you give and take in relationships in general and in the domain of sexuality can have negative consequences. A communal approach to relationships, discussed previously, where partners give benefits to each other based on need and without the expectation of direct reciprocation, is contrasted with an exchange approach to relationships where partners track and trade benefits to ensure benefits are even and tend to give with a focus on what they will get in return (for a review, see Clark & Mills, 2012). In one study in which the communal-exchange distinction was applied to sexual aspects of a relationship, for men, being more sexually exchange oriented was associated with lower relationship satisfaction (there was no association for women). For women, being

more sexually communal was associated with higher relationship satisfaction (there was no association for men; Hughes & Snell, 1990). To reconcile these findings with the IEMSS approach, additional research is needed to understand when and for whom an exchange versus a communal approach might be most beneficial for sexual satisfaction. However, taken together, research on sexual exchange suggests that sexual relationships with more rewards are more satisfying and that some degree of mutuality between partners is important, but perhaps tracking the balance between partners too closely can negate these benefits and even be costly for sexual satisfaction.

**Interdependence Theory.** One of the most influential theories in relationship research used to understand dyadic processes in relationships is interdependence theory. This theory was first applied to close relationships in the 1970s (Kelley & Thibaut, 1978; Levinger & Snoek, 1972) and by the 1980s was a dominant theory in relationship research (Kelley et al., 1983; Rusbult, 1983). One of the primary tenets of interdependence theory focuses on the role of dependence between partners in predicting cooperative behavior as well as how partners navigate situations in which their interests conflict (Kelley, 2003). For example, when individuals are highly dependent on their partners for rewarding experiences, they tend to be highly committed to maintaining relationships, which can put them in a position of low power, unless their partners are also highly dependent on them. Mutual dependence between partners tends to promote cooperative behavior whereby partners are willing to make sacrifices for the sake of their partners and their relationships (e.g., Rusbult & Van Lange, 2003, 2008; Van Lange et al., 1997).

Interdependence theory posits that partners in romantic relationships will inevitably face situations in which their interests or preferences conflict, termed *interdependence dilemmas* (see review by Rusbult & Van Lange, 2003). These situations provide important information about people's motivations to pursue their own self-interests versus promote the interests of their partners (Rusbult & Van Lange, 2003, 2008). Interdependence theory suggests that when people choose to make a sacrifice for their romantic partners (i.e., give up something they want to do or do something they do not personally want to do for the sake of their partners), they enact a transformation in motivation—that is, change or transform their motives from initially being focused on pursuing their own interests to motives that are focused on broader consequences for the partners or the relationships (for reviews, see Day & Impett, 2015; Righetti & Impett, 2017).

Although, to date, the application of interdependence theory to sexuality has been limited, initial research has led to important insights into how couples can navigate sexual interactions in ways that promote sexual and relationship satisfaction, suggesting that further application of interdependence theory to sexuality has promise for the future. Interdependence dilemmas can take place in any domain in

which partners are dependent on each other, but perhaps no other specific relationship domain involves more dependence between partners than the domain of sexuality, given that the majority of long-term couples are monogamous (Blanchflower & Oswald, 2004) and therefore cannot get their sexual needs met outside of their relationship. One set of studies focused specifically on interdependence dilemmas in the domain of sexuality (Day et al., 2015). In situations of conflicting sexual interests in which people's partners were interested in sex but their own desire for sex was low, when people transformed their motivation—that is, focused less on the potential costs to themselves and more on the benefits to their partners of engaging in sex—they were more likely to have sex with their partners in these situations, and both partners reported greater sexual and relationship satisfaction as a result (Day et al., 2015). In fact, people higher in sexual communal strength were less motivated by the costs to the self and more motivated by the benefits to the partners and, in turn, reap benefits for their sex life and relationship.

Additional evidence from related research on sexual transformations—making changes to one's own sexual habits for a romantic partner—suggests that when people have romantic partners who change their sexual habits to meet their sexual needs, such as engaging in sex more frequently than they might desire, they report higher relationship quality than people who perceive that their partners are less willing to change their sexual habits (Burke & Young, 2012). People who indicated that they made more frequent sexual transformations and felt more positive about changing their sexual habits for partners had romantic partners who reported being more satisfied with their relationships (Burke & Young, 2012).

Future work applying interdependence theory to sexuality has great potential to yield important insights into the factors that predict transforming one's motivation to being more partner- and relationship-focused compared to more self-focused in situations of desire discrepancy between partners. For example, surely not all acts of “sexual sacrifice” are going to be beneficial, even when enacted to benefit the partner or the relationship. Relationship research has shown that when people engage in more general forms of partner regulation (i.e., actively attempting to get their partners to change an aspect of themselves, such as an annoying trait), they become more aware that their partners are not meeting their ideal standards—a process which can contribute to lack of acceptance in the partner—in turn detracting from relationship quality (Overall, Fletcher, & Simpson, 2006). In the studies by Burke and Young (2012) and Day et al. (2015), we do not know whether people made sexual transformations or changes in response to a direct request from their partners or if they picked up on the fact that they were not meeting or matching their partners' interests and transformed their motivations in the absence of a direct request. It is possible that direct requests from partners to enact a sexual change could heighten people's awareness that they are not meeting their partners' standards as well as make the partners feel less accepted, thereby lowering the satisfaction of both

members of the relationship. Future research is needed to investigate how direct and indirect ways of asking a partner to make sexual changes impact the quality of relationships.

### **Beyond the Individual and the Moment: Methodological Advances in Relationship Research**

Romantic relationships involve (at least) two people who influence each other and interact in many contexts and in different roles over the course of time. Yet a great deal of relationship research, particularly early work on romantic relationships, has tended to focus on only one partner who reports on his or her experiences at one point in time (Reis, Aron, Clark, & Finkel, 2013). Cross-sectional designs with one partner pose challenges to understanding sexual processes in relationships and frame research in dispositional terms, as researchers typically aim to understand how people differ from one another on some theoretically defined variable of interest. For example, how might a person's attachment security (i.e., the extent to which he or she feels comfortable with intimacy and trusts that a partner will be dependable) impact his or her feelings of sexual satisfaction? Questions such as this one provide important information about who might be most likely to be sexually satisfied but do not consider the influence that partners have on each other, nor do they account for the fact that partners will face different situations, challenges, and opportunities in their relationships that might shape aspects of their sexual relationships differently over time.

In the past several decades, key methodological developments and advances in statistical analysis have enabled relationship researchers to ask—as well as answer—more nuanced questions that take into account the influence that partners in a relationship have on each other and fluctuations in relationships over time. In this section, we discuss two broad methodological approaches in relationship science—dyadic research methods and repeated-measures designs—that have enabled relationship researchers to answer questions that have provided new insights into sexuality and relationships. Of course, these designs are not mutually exclusive; dyadic, repeated-measures designs (such as dyadic daily experience studies) have been used to understand sexual processes in relationships.

#### **Dyadic Research Methods**

Nearly 20 years ago, Gable and Reis (1999) stated that “a fundamental tenet of the field of personal relationships is that there is something special about the relationship that goes beyond the dispositional characteristics of the individuals involved” (p. 430). Although there is much to be gained from learning about who tends to have more satisfying sex lives in the context of their relationships (i.e., individual differences), it is also essential to seek the answers to other, more nuanced questions about how partners influence each other and how changes in partners or in

relationships over time influence sexual outcomes. The vast majority of sexual experiences occur in the context of romantic relationships (see review by Willetts, Sprecher, & Beck, 2004)—primarily (although not exclusively) in established, monogamous relationships (Blanchflower & Oswald, 2004), yet research on sexuality and relationships has historically included only one person (DeLamater & Hyde, 2004; Reis et al., 2013; Wiederman, 2004). Because relationships are inherently dyadic—or in the case of consensually nonmonogamous relationships may involve more than two partners—we can learn even more about what fosters fulfilling romantic and sexual relationships by considering the perspective of all partners in the relationship (Dewitte, 2014).

In recent decades, dyadic work in relationship research has expanded considerably—in part due to advances in online recruitment methods and statistical approaches for analyzing dyadic data, such as multilevel modeling techniques (Kenny, Kashy, & Cook, 2006; Reis et al., 2013). Dyadic research methods and recent statistical advances in dyadic analyses have led to important insights into how partners influence each other, have provided assessments at the level of the couple or relationship as opposed to the individual, have made it possible to test how accurate and biased people are at perceiving their partners' feelings and motivations, and have allowed for behavioral observation of interactions between partners.

**The Actor–Partner Interdependence Model.** Dyadic relationship research has revealed that people's dispositions, motivations, and behaviors not only influence their own feelings about their sex lives and relationships but also their partners' feelings. The actor–partner interdependence model (APIM; (Kenny et al., 2006) is one of the most widely used tools in dyadic relationship research for modeling interdependence between couple members (Garcia, Kenny, & Ledermann, 2015). Applying this model to sexuality has allowed researchers to answer many important questions about how partners in a romantic relationship influence each other. For example, although we knew for many years that people high in attachment avoidance have less fulfilling sexual experiences in relationships (e.g., (Hazan, Zeifman, & Middleton, 1994; Mikulincer & Shaver, 2016; Shaver & Hazan, 1988), the application of APIM in a study of married couples demonstrated that having a partner who is high in attachment avoidance is also associated with lower sexual satisfaction (Butzer & Campbell, 2008). That is, having dyadic data can allow us to look at not only how a person's own attachment influences his or her outcomes (actor effects) but also how attachment style influences a partner's outcomes (partner effects) above and beyond the influence of the partner's own attachment style.

As described in the theory section, several studies have demonstrated that a person's reasons for engaging in sex with a partner are associated with not only his or her own sexual desire and sexual and relationship satisfaction but

also the partner's desire and satisfaction (Brunell & Webster, 2013; Cooper et al., 2008; Muise, Impett, & Desmarais, 2013). Without reports and data from both partners, we would be unable to uncover these types of dyadic associations. Dyadic studies have also shown that what is beneficial for one partner is not always beneficial for the other partner. For example, research into perceptions of sexual desire suggests that on days when men underperceived their partners' sexual desire, they felt less satisfied, presumably because the men did not feel good when they perceived that their partners' interest in sex with them was low. However, their female partners reported feeling more satisfied, perhaps because the men may have been doing things to entice their partners' interest and enhance their connection (Muise, Stanton, Kim, & Impett, 2016). If the researchers had measured only one member of the couple, they would not have uncovered men's underperception bias (since men's perceptions of their partners' desire are compared to their partners' reports of their own desire) or the fact that this underperception bias was associated with different relationship outcomes for male partners versus their female partners.

**Common Fate Model.** Data from two partners can also allow researchers to use multiple people as informants of a sexual or relationship event. With this approach in which both partners are “informants” on a particular construct of interest—called the common fate model (Ledermann & Kenny, 2012)—the unit of analysis is the couple rather than the individual. For example, in one study of pornography acceptance and sexual satisfaction among married couples, researchers tested how the shared variance (i.e., the overlap in partners' reports) of pornography acceptance was associated with the couples' sexual satisfaction. The results showed that in couples who had more accepting attitudes about the use of pornography, both partners used pornography more frequently; in turn, the couple was more satisfied with their sex life (Brown et al., 2017). In this study, instead of assessing how one partner's acceptance of pornography use influenced the other partner's satisfaction (which in and of itself is an interesting question), the researchers gathered information from each partner to obtain both partners' perceptions of the overall acceptance of pornography use and couple-level satisfaction.

**Accuracy and Bias.** Another way to consider both partners' points of view in research is to test how accurate or biased partners are in their perceptions of each other. New modeling techniques—such as the truth and bias model (West & Kenny, 2011) and response surface analyses (Barranti, Carlson, & Cote, 2017)—provide novel opportunities for researchers to test how accurate and biased people are in detecting their partners' motives, feelings, and behaviors and the consequences of this for sexual and relationship outcomes. As discussed, having both partners'

reports of their own sexual desires, as well as their perceptions of their partners' sexual desires, allows researchers to test how accurate partners are at perceiving each other's sexual desire, whether they tend to over- or underperceive desire, and the consequences of this for the relationship (Muise et al., 2016). Signal detection theory, although yet to be applied to sex in the context of relationships (for application to relationship research, see Gable, Reis, & Downey, 2003), is an approach that can be used to assess how often partners agree on whether a specific event occurred in the relationship. For example, future research could use signal detection analysis to determine if partners agree on whether sex was initiated on a particular day or if one person's initiation attempts were missed by his or her partner, and what might account for discrepancies in partners' reports.

Of course, differences between one partner's perceptions and the other partner's reports of sexual desire may not be solely attributed to perceptual errors. It is also possible that differences in partners' reports could be due to differences in how men and women express sexual interest (Perilloux & Kurzban, 2015). For example, if a woman has high sexual desire, her partner may not perceive this—not because he is oblivious to her feelings but because she may express her sexual interest in different ways than he would. Future research using methods to assess accuracy and bias can also examine the characteristics of both the perceiver and the person being perceived as well as the relationship factors that predict differences in partners' reports.

**Behavioral Interaction Studies.** In-lab interaction studies with both members of romantic couples have been important for moving research beyond self-report and incorporating more objective, behavioral assessments of live couple interactions. In one study, both members of a couple took a turn discussing an aspect of their sexual relationship they wanted to change, and their sexual communication was then coded on positive and negative dimensions (McNeil, Rehman, & Fallis, 2018). In contrast to studies that find that anxious attachment is associated with self-reported poorer sexual communication, no effects of attachment anxiety were observed for enacted sexual communication behaviors, perhaps suggesting that anxious individuals are unwarrantedly negative in their self-perceptions of sexual communication ability.

An additional aspect of relationships that is often overlooked in research is that people interact with the same partner in different contexts and during their interaction they communicate about a variety of topics. In-lab social interaction studies combine dyadic research with a within-person approach by investigating dyadic interactions across contexts. In one of the only package of studies of which we are aware in sex research, couples were observed discussing both a sexual and nonsexual conflict in their relationship (Rehman et al., 2011; Rehman, Lizdek, Fallis, Sutherland, & Goodnight, 2017). The findings of a pilot study on 15 couples suggested that the

emotions expressed to a partner during a conversation about sexual conflict (as coded by outside observers) were a stronger predictor of relationship quality compared to emotions expressed during a nonsexual conflict (Rehman et al., 2011). A more recent study on 115 couples found that, relative to nonsexual conversations, couples showed greater behavioral cues of warmth and were more coordinated in their displays of warmth in sexual conversations (such as by responding to their partners' smiles by smiling themselves; Rehman et al., 2017). By observing couple interactions across contexts, this work provides initial evidence that successfully navigating sexual issues may be particularly important for feelings of closeness and intimacy in a relationship, and that couples approach sexual communication differently from nonsexual communication.

### Repeated-Measures Designs

Traditionally, cross-sectional surveys have dominated research methods used in both relationship and sexuality research (DeLamater & Hyde, 2004; Reis et al., 2013; Wiederman, 2004). One key limitation of these methods is that this design allows researchers to answer only questions about between-person differences and does not provide information about within-person changes over time. However, Gable and Reis (1999) argued that investigating processes that change *within* a person—that is, how people's behaviors, thoughts, and feelings are shaped by context and change over time—is important for answering novel and nuanced questions about relationships. Whereas between-person questions focus on understanding, for example, why some people are more satisfied than others, within-person questions focus on understanding why some contexts elicit greater satisfaction than others.

Within-person processes in relationships have primarily been investigated using (a) everyday experience sampling and (b) longitudinal methods. Experience sampling methods involve repeatedly sampling a person's reports of their thoughts, feelings, or behaviors over the course of time. These methods can involve daily experience studies in which participants provide daily reports, momentary assessments where participants are triggered to complete surveys multiple times per day, or surveys completed in response to a specific event (i.e., engaging in sex) (for a review of experience sampling methods, see Reis, Gable, & Maniaci, 2014). Repeated-measures designs necessitate the use of statistical techniques that account for the nonindependence in the data, such as multilevel modeling (Bolger & Laurenceau, 2013). Other types of longitudinal methods have been used to test how assessments of certain aspects of a relationship influence feelings about the relationship at a later time point (e.g., Byers, 2005; Fallis, Rehman, Woody, & Purdon, 2016) or, less commonly, have been used to follow participants over several months or years to look at trajectories in relationships (i.e., how satisfaction changes over time) (e.g., (McNulty et al., 2016).

**Experience Sampling Methods.** Everyday experience sampling methods, such as daily experience studies, have several advantages for studying sexuality in relationships (see discussion by Dewitte, Van Lankveld, Vandenberghe, & Loeys, 2015). Generally, these designs are useful in reducing or eliminating retrospective bias because people are reporting on their experiences close in time to when they actually occurred. Also, because reports are repeatedly sampled, experience sampling designs provide multiple instances of a person's motives, feelings, and behavior across contexts, thereby enhancing the representativeness and generalizability of the results (Reis et al., 2014). Given that sexual activity is a specific behavior that occurs in relationships, everyday experience sampling methods allow couples to answer questions about a specific sexual experience when it occurs in their daily lives. From research using daily experience methodology—where people report on their sex lives and relationships each day for several weeks—we know that on days when couples engage in sex compared to days when sex does not occur, they tend to report better mood and less stress (on that day and the following day; Burleson, Trevathan, & Todd, 2007) and higher relationship satisfaction (Muise, Impett, & Desmarais, 2013).

Daily experience studies also allow researchers to move beyond a focus on uncovering between-person differences and instead investigate how within-person changes influence sexual and relationship outcomes. For example, within-person changes in people's reasons for engaging in sex are associated with daily desire and satisfaction. In a 21-day daily experience study, on days when people were more motivated to have sex to pursue positive outcomes in their relationships (i.e., higher in approach sexual goals) compared to their own average, both partners reported higher sexual desire and, in turn, higher satisfaction (Muise et al., 2013). That is, this study focused on how within-person changes in a person's reasons for having sex (accounting for between-person differences in sexual goals) influenced their desire and satisfaction on that day.

Everyday experience sampling methods also allow for tests of directionality (Reis et al., 2014). Although lagged-day and over-time models cannot provide conclusive evidence of causality, they often offer a more ecologically valid approach to studying directionality relative to experiments. For example, in a recent study where sexual activity was reported each day and positive affect was reported four times per day, cross-lagged analyses (in which people's reports of sexual activity on one day were tested as a predictor of positive affect on the following day, controlling for positive affect experienced that day) were used to provide support for directionality of the effects (Debrot, Meuwly, Muise, Impett, & Schoebi, 2017). The findings indicated that engaging in sex on one day predicted increases in positive affect the next morning (from the previous day), but that positive affect on one day did not predict a greater likelihood of engaging in sex the next day, providing stronger evidence that sex predicts well-being compared to the reverse causal direction (Debrot et al.,

2017). Similarly, daily experience studies can be used to demonstrate carry-over effects. In a 14-day daily experience study, sexual satisfaction remained high over the 48 hours following a sexual encounter in a relationship (i.e., carried over for the next two days), providing evidence for a two-day "sexual afterglow" effect (Meltzer et al., 2017).

**Longitudinal Designs.** Longitudinal designs—where participants report on their sex lives and relationships at multiple time points over longer periods of time—can also provide insights into the direction of associations between two variables and can inform how sexuality changes over the course of a relationship. Although the association between sexual and relationship satisfaction has been well established (for a review, see Impett et al., 2014), pinpointing the direction of this association is important for tailoring clinical interventions (Fallis et al., 2016). That is, if sexual satisfaction leads to greater relationship satisfaction, sex-specific interventions could be important for enhancing relationship quality; or if relationship satisfaction leads to sexual satisfaction, relationship interventions could improve sexual issues. In two 8-wave longitudinal studies of married couples, McNulty et al. (2016) demonstrated that sexual satisfaction at one wave of measurement positively predicted changes in relationship satisfaction from that wave to the next wave, and that relationship satisfaction at one wave positively predicted changes in sexual satisfaction from that wave to the next. However, in a two-year longitudinal study with two time points, Fallis et al. (2016) found that, for both men and women, earlier sexual satisfaction significantly predicted later relationship satisfaction, but that earlier relationship satisfaction did not significantly predict later sexual satisfaction. The findings from this study suggest that sexual satisfaction may be a stronger predictor of subsequent relationship satisfaction than the reverse. One reason that these two studies may differ is because the latter focused on only two time points in the relationship and assessed sexual and relationship satisfaction two years apart, whereas the former set of studies included eight time points and assessed sexual and relationship satisfaction every six to eight months. Taken together, the findings from longitudinal research demonstrate the bidirectional association of sexual and relationship satisfaction and show how they are associated over longer periods of time in relationships. Further utilization of these designs can investigate the factors that contribute to or detract from sexual and relationship satisfaction over the course of time.

Other longitudinal work has used multiple time points to model trajectories of satisfaction in relationships and to investigate the variables that account for changes in satisfaction over time (e.g., Meltzer, McNulty, Jackson, & Karney, 2014). Sexual and relationship satisfaction both tend to decline with increasing relationship duration (McNulty et al., 2016), and longitudinal research methods that model changes in satisfaction over the course of time have provided insight into when these declines tend to occur. Using three waves from the German Family Panel Study—a nationally representative



sample in Germany—one study demonstrated that sexual satisfaction increases during the first year of a relationship but then steadily declines (Schmiedeberg & Schroder, 2016). Compared to evidence indicating that the majority of couples can maintain stable relationship satisfaction 2.5 years into their marriage (Lorber, Erlanger, Heyman, & Leary, 2015) and even longer (Anderson, Van Ryzin, & Doherty, 2010), Schmiedeberg and Schroder's (2016) findings suggest that sexual satisfaction may decline earlier than relationship satisfaction.

A practical advantage of repeated-measures designs is that these types of designs enhance power (i.e., the probability of accurately detecting a true effect) over between-person designs (e.g., Bakeman, 2005). Recent estimates suggest that within-person designs may require half as many participants as between-subjects designs, or even fewer, depending on the research questions (Bellemare, Bissonnette, & Kroger, 2014, October). Although repeated-measures designs can require more time and effort to collect, needing fewer participants to achieve high power can help mitigate this burden. Related to this, having a high-powered study enhances the replicability of research findings, meaning that effects are more likely to hold across multiple studies and suggest that we can have increased confidence in applying these effects in educational or clinical contexts (Sakaluk, 2016).

### Considerations for Future Research

Although we have highlighted the advantages of dyadic and repeated-measures designs, the choice of the most appropriate research design should be guided by the particular questions researchers would like to answer, and of course, some questions do not necessitate dyadic or repeated-measures designs (i.e., how personality influences a person's global evaluations of his or her sexual relationship). In addition, these types of designs are not without their challenges. Repeated-measures and dyadic designs necessitate more advanced statistical techniques that account for dependency in the data, such as multilevel modeling. However, there are increasingly more online resources that can help simplify these analyses, such as Web applications that automate the necessary data restructuring (e.g., Ledermann & Kenny, 2015), and some researchers are providing online resources for conducting analyses using open science data sharing (e.g., Sakaluk & Short, 2017).

An additional challenge is that recruiting both partners (or more) for research, especially when the participants need to complete multiple assessments over time, can be costly and time-consuming. If the research questions do not require participants to attend an in-lab session, online recruitment efforts, such as recruiting on social media or Web sites such as Craigslist and Kijiji, or using snowball sampling techniques (where participants connect the researchers with other participants), have made participants more accessible and have broadened the geographical area from which researchers can recruit, helping reduce the

burden and duration of data collection. Given that dyadic and repeated-measures studies can often be designed to answer multiple research questions, collaborating with other researchers can reduce the cost and labor for each person. In addition, Vazire (2006) found that once participants have been recruited for a study, there are low-cost ways to obtain brief surveys from informants, such as the person's romantic partner (Vazire, 2006). For example, researchers may recruit individuals in relationships to complete a longer survey and compensate them financially, but then ask participants to send a brief survey to their partner (who is not compensated) that contains measures of only key variables of interest. Such a strategy would still allow researchers to answer questions about how a person influences a partner's outcomes or to have the partner act as an informant for specific behaviors (e.g., sexual frequency) or traits (e.g., attachment style) of interest.

There are many opportunities for researchers to use these designs in future work to answer novel and nuanced questions about sexual and relationships. Future research would benefit from using mixed between- and within-persons research designs to investigate how dispositional variables (e.g., attachment orientation) interact with situational variables (e.g., a positive or negative sexual experience) to influence sexual and relationship outcomes (Wiederman, 2004). One study employing such a design found that people high in attachment anxiety experienced more intense reactions to both positive and negative sexual experiences than less anxious people (Birnbaum et al., 2006). A mixed between- and within-person design can help researchers answer questions about who might benefit most or who might be most negatively impacted by specific relationship or sexual interactions. In sum, the use of dyadic and repeated-measures designs have shaped the kinds of questions that sexuality and relationship researchers can ask and to which they can provide answers, and there are many new projects on the horizon for future work at the intersection of these two disciplines.

### Applying Sexuality Research to Relationship Research

Although in this review we have primarily focused on how theories and methods from relationship science can inform sexuality research, there are many ways in which relationship research has benefited—and can continue to benefit—from sexuality research. We believe that adequately discussing the ways in which sexuality research has contributed, and can continue to contribute, to relationship research is beyond the scope of this review, but we want to highlight two strengths of sexuality research that hold great potential to improve relationship research. One important aspect of sexuality research is a focus on inclusivity and diversity in research samples. Many theories of sexuality in close relationships are heterocentric (DeLamater & Hyde, 2004), presuming heterosexuality is the norm

(Rose, 2000), and focusing on men and women in monogamous heterosexual relationships (Conley, Matsick, Moors, & Ziegler, 2017). Both informal (Blair, 2014) and systematic reviews (Andersen & Zou, 2015) suggest that relationship research regularly neglects nonheterosexual individuals. Relationship researchers can move toward greater inclusivity in their research by taking relatively simple steps such as ensuring study recruitment materials are inclusive of sexual minorities and diverse relationship configurations, and asking, rather than assuming, participants' gender identity and sexual orientation (Andersen & Zou, 2015; Blair, 2014). Even data from a small number of same-sex couples could be combined across studies in future meta-analyses, making it advisable to allow same-sex couples to participate in research studies.

Relatedly, relationship researchers could be more inclusive and diverse in the types of sexual outcomes they measure. Relationship researchers rarely measure explicit sexual practices (perhaps due to discomfort), and instead favor almost exclusively global measures of sexual satisfaction or sexual desire (Diamond, 2013). Consequently, relationship researchers are missing out on opportunities to study more nuanced sexual relationship issues, such as negotiating pornography use or use of sex toys, and expressing interest in less normative sexual activities. By asking participants about their interest or engagement in nonnormative sexual behaviors, relationship researchers can ensure a wider range of people feel comfortable participating in—and feel more represented by—relationship research, which will allow relationship researchers to gain a more complete understanding of couples' sexual functioning.

Sexuality research also has a long history of influencing social policy and clinical practice. For example, research on same-sex couples and their children's well-being has been used in U.S. state and federal legal proceedings (American Sociological Association, 2013; Umberson, Thomeer, Kroeger, Lodge, & Xu, 2015) to argue in favor of same-sex marriage. Likewise, based on empirical research, sexuality researchers advocated for changes in how women's sexual dysfunction is defined (Basson et al., 2004; Graham, 2010), such that the most recent version of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)* amalgamated female hypoactive desire disorder and female arousal disorder under an overarching female sexual interest/arousal disorder diagnosis (Ishak & Tobia, 2013). These changes are in line with the fact that desire and arousal are not easily differentiated in many women (see discussion by Graham, 2010). There is also a growing body of literature on the interpersonal factors that influence sexual and relational outcomes in couples coping with a sexual dysfunction (Rosen, Muise, Bergeron, Delisle, & Baxter, 2015; Rosen, Muise, Bergeron, Impett, & Boudreau, 2015), and these findings are being incorporated into intervention studies and applied in clinical practice (Bergeron, Khalife, Dupuis, & McDuff, 2016). By advocating for change, sexuality researchers have helped clinicians have a clearer picture of sexual dysfunction that is more in line with empirical findings and women's experiences. As others

have noted (e.g., Berscheid, 1999; Campbell & Simpson, 2013), relationship researchers could do more to ensure that relationship research is being used to inform social policies, such as policies on single-parent households or intimate partner violence.

## Conclusions

Research has consistently demonstrated that people who are the most satisfied with their sex lives are also the most satisfied with their romantic relationships (e.g., Byers, 2005; McNulty et al., 2016). Yet there are numerous challenges to having and maintaining a satisfying sexual relationship, such as normative declines in sexual desire (see review by Impett et al., 2014) and satisfaction (e.g., McNulty et al., 2016), and discrepancies in partners' levels of sexual desire (Davies et al., 1999; Mark, 2012) that can create lasting tension and conflict in relationships. The importance of sex for the quality of relationships, coupled with the challenges that many couples face maintaining desire and satisfaction over the longer term, highlights just how crucial it is that we, as relationship and sexual scientists, develop a better understanding of how couples can maintain sexual desire and satisfaction as well as more successfully navigate and cope with sexual challenges.

We have tried to build a case that theories and methods from relationship research are uniquely positioned to answer such questions—questions which necessitate obtaining data from all partners and at multiple points in time as their relationships, both sexual and otherwise, develop and change. Relationship research and sexuality research are both thriving areas of research, each answering questions for which couples deserve answers to maximize the quality of their sexual relationships. It is our position that the merging of these two disciplines has created—and will continue to create—a body of knowledge about sex and relationships that is more than the sum of its parts.

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